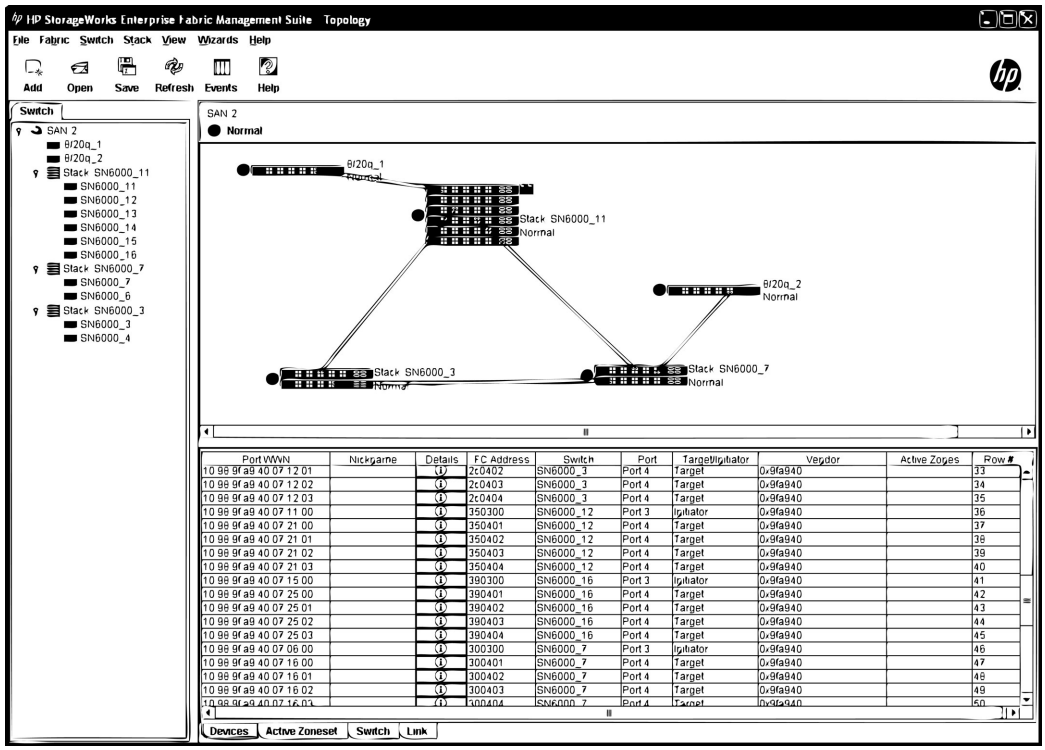
Overview

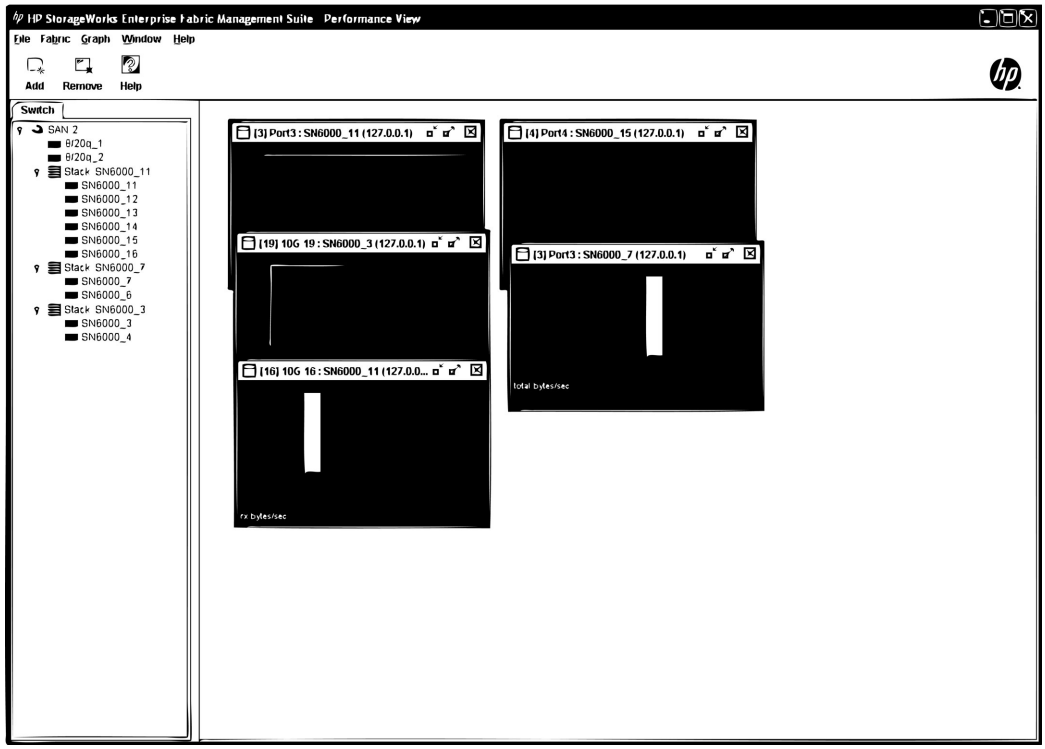
HP Enterprise Fabric Management Suite (EFMS) software is a set of simple and powerful fabric management tools for HP H-series fabrics. A single pane of glass provides performance and fabric monitoring as well as configuration tools for H-series fabrics. Users are licensed to manage an unlimited number of switches and fabrics from a single, fully integrated application.

Enterprise Fabric Management Suite also provides maintenance, isolation and troubleshooting capabilities for SAN administrators who require advanced tools. Included with EFMS is a comprehensive set of real-time diagnostic tools for monitoring and troubleshooting Fibre Channel Fabrics. Determine if a device is responding, trace the path in the fabric, as well as monitor the health of SFP and XPAK transceivers.

A single management application, a single license and a single pane of glass gives administrators the power to maximize application and storage performance and availability.



Overview



Models

HP Enterprise Fabric Management Suite LTU	TC321A
HP Enterprise Fabric Management Suite E-LTU	TC321AAE

Highlights

- Single pane of glass centralizes management for an unlimited number of H-series fabrics and devices
- Manages stacks of H-series switches as a single entity
- Capability for user to specify which licensed ports are activated with mPort Technology (units with less than 20 device ports enabled) - deactivate one to four stacking ports and activate one to four device ports
- Performance Monitoring provides easy-to-configure/easy-to-use graphs for monitoring the performance of your Fibre Channel SAN
- Setup, configuration, zoning and advanced fabric management from a single, seamless application.
- Auto Filtering enables easy access to port statistics, IP network information, environmental statistics and fan or power supply information.
- Diagnose fibre channel fabrics with Ethernet-type diagnostic tools
- Pinpoint fabric connectivity problems
- Improve fabric performance by optimizing network paths
- Proactively monitor optical media health
- Proactively monitor fabric by setting thresholds and alarms for each switch port

Feature List

HP Enterprise Fabric Management Suite Features:

- **Performance Monitoring provides** easy-to-configure/easy-to-use graphs for monitoring the performance of your Fibre Channel SAN. Troubleshoot fabric problems and indentify performance bottlenecks before they become an issue. Historical performance data can be exported to spreadsheets or databases for analysis.
- **Extended Credit Wizard** steps the user through a simple and easy to use interface, allowing the user to quickly configure ports to support situations when long distance communication is required.
- **Fabric Tracker** allows the user to view two saved configurations and compare the differences. Periodically take a snap-shot of the fabric configuration to see what has changed from yesterday, a week ago, a month ago, or from the day of installation.
- **Fabric Monitoring** enables the user to configure thresholds and alarms per switch port to alert operations when unexpected error rates, traffic levels, or anomalies occur in the fabric. Enterprise Fabric Management Suite can be configured to send alerts, through SNMP for full integration into existing enterprise monitoring applications.
- **Auto Filtering** takes the time and labor out of finding useful switch and port statistics- health, operation, and environmental statistics are a mouse click away. Filter switch data using buttons that group data into logical sets. Quickly find critical switch information such as power, cooling, health and the associated IP network status.
- **Fabric Zoning** provides simple drag and drop zoning with fast and easy activation. Unmatched flexibility with support of multiple zoning types: Port WWN Zoning, Node WWN Zoning, FCID Zoning, Hard Zoning, Soft Zoning.
- **Device Management** is a mouse click away through the topology view. Configure IP network properties, upgrade firmware, view and modify switch properties easily. Setup and configuration of devices in the fabric is made simple and fast.
- **Configuration and Zoning Wizards** makes a switch that is already easy to configure and zone even easier. Prompts guide the user through screens to quickly configure and zone a switch.
- **Switch and Fabric Event Monitoring along with Alerting** provide the user with views of monitored events and alerts that can also be configured and sent to management applications through SNMP.
- **mPort Technology** provides users with the flexibility to decide which licensed ports are active (SN6000 or 8/20q with less than 20 enabled device ports) . De-activate one to four of the high-speed stacking ports of the SN6000 and enable the equivalent number of device ports. The administrator decides which ports are active based on their fabric needs.
- **Robust On-Line Help** features provide step by step instructions through an embedded Help function.
- **Fibre Channel Fabric Ping** is an essential tool for troubleshooting fabric problems. FC Ping verifies that a functional path exists between two ports and provides round trip information. Administrators can determine which ports and devices are responding - allowing the administrator to quickly identify issues.
- **Fibre Channel Trace Route** provides insight about the fabric and assists with troubleshooting congestion. FC Trace Route traces the route through the Fibre Channel network and displays path information between a source and destination device in order to determine the path of communication between the two devices. Knowing this aids the administrator in making decisions about fabric performance and problem resolution. FC Ping used in conjunction with FC Trace Route gives the administrator a powerful tool to pinpoint fabric connectivity problems and diagnose performance issues.
- **Digital Diagnostics Monitoring** provides SFP and XPAK transceiver data and health status that SAN administrators depend on. Increase uptime of the SAN by proactively monitoring the vitals of transceivers. Set policies and trigger alarms based on power, temperature, voltage and current of the transceiver. Predict potential failures or isolate existing problems in the fabric with this simple, yet powerful, tool.

Pre-Requisite Information

Software Pre-Requisites

Firmware versions defined in SAN Design Guide: http://www.hp.com/go/SANDesignGuide

Hardware Prerequisites

H-series switches (SN6000 and 8/20q) listed in the SAN Design Guide.

BK780A SN6000 Stackable 8Gb 12-port Single Power Fibre Channel Switch
AW575A SN6000 Stackable 8Gb 24-port Single Power Fibre Channel Switch
AW576A SN6000 Stackable 8Gb 24-port Dual Power Fibre Channel Switch
AQ233A 8/20q 8 port active Fibre Channel Switch
AK242A 8/20q 16 port active Fibre Channel Switch
AK241A HP 8Gb Simple SAN Connection Kit

Also, refer to:
http://www.hp.com/go/SANDesignGuide.

Server Pre-Requisites

HP Enterprise Fabric Management Suite is supported on the following operating systems:

- Microsoft Windows Server 2003 R2 w/ SP2
- Microsoft Windows Storage Server 2003 R2 w/ SP2
- Microsoft Windows 2008 R2

HP Enterprise Fabric Management Suite (EFMS) must be installed on a server that meets the minimum requirements specified in the EFMS User Manual.

Reference URL: www.hp.com/go/EFMS for additional information and supporting documentation

Software Licensing

The HP Enterprise Fabric Management Suite license enables users to run EFMS on an unlimited number of servers, and manage an unlimited number of fabrics and switches at a geographical location.

Service and Support, HP Care Pack, and Warranty Information

Product Warranty

HP warrants only that the software media will be free of physical defects for a period of ninety (90) days from delivery.
EXCLUSIVE REMEDY. The entire liability of HP and its suppliers and your exclusive remedy for Software that does not conform to this Limited Warranty shall be the repair or replacement of the defective media. This warranty and remedy are subject to your returning the defective media during the warranty period to HP in the country in which you obtained the Software.

For increased uptime, productivity and ROI -HP Care Pack packaged services for Storage

These days, you need to get the most out of your storage investment-you can't afford not to. When you buy HP storage products and solutions, it's also a good time to think about what levels of service and support you may need. To help take the worry out of deploying, designing, maintaining, and managing your environment, we've designed a portfolio of service options that are as: flexible, reliable and scalable as your storage. Unlike storage-only vendors, we take a holistic approach to your entire environment, bridging storage, servers, blades, software and network infrastructures with our HP Care Pack packaged services for Storage.

Protect your business beyond the warranty

When it comes to robustness and reliability, standard warranties on today's computing equipment have matured just as the technologies have matured. Good news on some fronts-but also a source of potential problems and subsequent consequences that come from depending on standard warranties alone. Standard warranty protects against product defects and some causes of downtime- but not the business. By using a standard approach to warranty uplifts, such as HP Care Pack Services, you can reduce downtime risks and be more certain of operational consistency for both mission-critical and standard business computing. Simply put, HP Care Pack Services normalize the warranty of combined products - helping you proactively guard against unplanned downtime.

Extending warranties with HP Care Pack Services

For cost-effective upgrading or extending your standard warranty, HP Care Pack Services offer a suite of standard reactive hardware and software support services that are sold separately, or combined as with our Support Plus and Support Plus 24 services. The portfolio also provides a combination of proactive and reactive services, such as Proactive 24 Service and Critical Service. In addition, with HP Proactive Select we offer an innovative approach to service delivery that gives you the flexibility to acquire the specific proactive services you need today, then add services as your needs evolve. HP Proactive Select offers a broad set of technical or per-event type service options - including server, storage, and network, SAN device, and software, environment, installation and education services. Services that you can mix and match depending on your specific requirements, from preliminary planning and equipment delivery to installation, configuration, integration, and testing, through every level of ongoing support. Our HP Care Pack packaged services for Storage assures help when you need it most. And for many products, post-warranty HP Care Pack Services are available when your original warranty has expired.

HP Storage Services: Offering reliability, flexibility and value-just like your storage

HP Storage Services offers a full spectrum of customer care, from technology support to complex migrations to complete completely managed services. HP Factory Express provides customization, integration and deployment services for turnkey solutions. HP Education offers flexible, comprehensive training on storage networking, disk storage systems, and storage software to help your IT staff get the most out of your investments. And HP Financial solutions extend innovative financing and asset management programs to cost-effective buy, manage and eventually retire your older equipment.

HP Storage Services, the trusted business technology experts who manage your technology in action, because when technology works, business works. http://www.hp.com/services/storage
NOTE: Care Pack Services availability may vary by product and country.

Service and Support, HP Care Pack, and Warranty Information

HP Care Pack Services are sold by HP and HP Authorized Service Partners:

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at http://www.hp.com/go/lookuptool

Recommended HP Care Pack Services for optimal satisfaction with your HP product.

Recommended Services **3-Year HP Support Plus 24**

For a higher return on your storage investment, HP Support Plus 24 provides integrated hardware and software support services designed specifically for your technology. Available 24x7, this 3-year combined reactive support option delivers onsite hardware support and over-the-phone software support around-the-clock. Leverage the full strength of HP Technology Services - customers can trust the services professionals at HP to work collaboratively with them, putting our strategic and technical know-how to work across their entire infrastructure.

- Improve uptime with responsive hardware and software services
- Enjoy consistent service coverage across geographically dispersed sites
- Update HP software at a predictable cost
- Increase customer satisfaction-with no interoperability gaps

http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-6638EN.pdf

HP Enhanced Implementation Service for SANs

For customers who are building a new SAN or expanding their existing one, we offer the HP Enhanced Implementation Service for SANs. This provides complete design and implementation services for Fibre Channel, FCOE, FCIP, SAS and iSCSI SAN connectivity components. Covering all major SAN connectivity technologies including virtual as well as physical hosts, no competitor offers a more complete end to end SAN design and implementation service, ensuring comprehensive optimal SAN connectivity tailored to your specific environment.

- Ensures optimal SAN connectivity tailored to your specific environment.
- Allows your IT resources to stay focused on their core tasks and priorities
- Reduces implementation time, impact and risk to your storage environment
- Helps ensure a successful implementation for complex deployments by providing HP project management

http://h20195.www2.hp.com/v2/GetPDF.aspx/5981-8527EN.pdf

HP Assessment Service for SANs

The HP Assessment Service for SANs offers customized technical and operational guidance to customers employing HP storage subsystems and the interconnecting storage area network (SAN) infrastructure. In a typical engagement, HP or one of our authorized business partners will perform a detailed discovery using HP's proprietary toolset to gain an understanding of the configuration of your storage devices and SAN topology.

The findings from this process will be compared to HP best practices and industry standards as defined by IT Service Management (ITSM) disciplines. The results of the evaluation will be quickly and efficiently processed into information you can leverage. This information, in the form of a comprehensive HP SAN Assessment report, will be summarized by HP or one of our authorized business partners with recommendations that are intended to improve availability levels and ongoing management of your storage and SAN environment.

- Recommendations to optimize your customer's SAN based on comprehensive discovery information
- Decrease the potential for unplanned downtime and encourage higher productivity by exposing single points of failure and other potential SAN configuration issues
- Clear documentation allows for optimal SAN management, more efficient future SAN implementations and lower IT staff involvement
- Service requires no SAN downtime and is easily adapted as a periodic review to help keep SANs performing efficiently as business evolves

http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA1-2941ENW.pdf

Optional HP Care Pack Services that will enhance your HP product experience.

Optional Services **3-Year HP Proactive 24 for SANs**

As an alternative to our recommended support level, for customers who want improved SAN availability and access to a wide range of proactive and reactive services:

HP Proactive 24 Service for SANs is an integrated hardware and software support service that combines proactive problem prevention with responsive 24x7 assistance for rapid problem resolution.

A collaborative relationship with HP Services strengthens your IT team and gives you direct access to our technical expertise as issues arise.

Improve IT staff skills, increase SAN productivity.

Proactive 24 Service for SANs can help you:

- Enhance the skills and efficiency of your IT staff through knowledge transfer, shared best practices in storage management, and hands-on assistance
- Improve SAN availability through access to a wide range of proactive and reactive services
- Boost productivity through effective change management, configuration assistance, and performance optimization
- Increase the return on your SAN investment
- Enhance your overall operational effectiveness

Expert single-point-of-contact assistance 24x7

An assigned HP Services account manager is your primary contact for proactive services and access to HP's diverse technical resources. Your account manager works closely with your IT staff to understand your goals, document the components of your infrastructure, recommend changes to improve performance and stability, and monitor ongoing operations through HP's industry-leading remote monitoring and support tools.

http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA0-1614ENUC.pdf

Service and Support, HP Care Pack, and Warranty Information

eSupport

HP eSupport is a portfolio of technology-based services that assist you with managing your business environment - from the desktop to the data center.

Support Portal
The HP support portal provides one-stop access to the information, tools and services you need to manage the daily operations of your IT environment.

Features include:

- Access to self-solve tools (including search technical knowledge base)
- Efficient logging and tracking of support cases
- Collaboration with other business and IT professionals
- Download of patches and drivers
- Access to diagnostic tools
- Proactive notification of relevant information

Access to certain features of the support portal requires an HP service agreement. To access the support portal, visit: http://www.hp.com/support

Customer Technical Training

Consider education as an integral part of your strategy to get the best return on investment for your HP storage solution. HP offers a variety of training courses on storage software, networking, archiving and disk storage systems. Our classes are available in many delivery modalities from traditional instructor-led courses at one of our 80 training centers worldwide to on-site training customized to your needs or online. www.hp.com/learn/storage

HP Services Awards

HP Services continues to be recognized for service and support excellence by customers, partners, industry organizations and publications around the world. Recent honors and award reflect our services team's dedications, technical expertise, professionalism and uncompromising commitment to customer satisfaction. For a list of all our awards, please visit
http://h20219.www2.hp.com/services/cache/433028-0-0-225-121.htm

Additional Services Information

For more information about HP Care Pack Services for Storage, please visit:
http://www.hp.com/services/storage

If you have specific questions, contact your local HP representative. Contact information for a representative in your area can be found at "Contact HP" http://www.hp.com

Configuration

Select one:

Model Number	Model Description	Part Number
	HP Enterprise Fabric Management Suite LTU	TC321A
	HP Enterprise Fabric Management Suite E-LTU	TC321AAE

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